



NOAA's Initial IOOS Focus: Data Integration



SYSTEMS ENGINEERING PROCESS
user requirements, continual feedback,
process improvement

Integrate 5 IOOS Core Variables
Driven by Standards & Data Products

Test & Evaluate Data Products
for Baseline Improvements

New Benchmark for Operations

Extension
Regional, Federal & other Data Streams

MEETING NOAA MISSION GOALS

Enhanced Decision Support Through...

- *Integrated information services for NOAA programs & the Nation*
- *Identification of observation gaps*
- *Validated data products*
- *NOAA's Data Integration Framework: Extensible & Flexible*

IOOS Core Variables

Temperature
Salinity
Sea Level
Surface currents
Ocean color
Bathymetry
Surface waves
Ice distribution
Contaminants
Dissolved nutrients
Fish species
Fish abundance
Zooplankton species
Optical properties
Heat flux
Bottom character
Pathogens
Dissolved O₂
Phytoplankton species
Zooplankton abundance

Integration

Long-term data series, coordinated in space and time

NOAA Decision Tools

Hurricane Intensity Model

Coastal Inundation Model

Harmful Algal Bloom Model

Integrated Ecosystem Assessment



What Technologies are Important for IOOS?



Draft U.S. IOOS Strategic Plan Goals:

- **Goal 1:** The national IOOS is a unified system that provides seamless delivery of ocean and coastal information and predictions; and includes federal, non-federal, national and regional components for implementation.
- **Goal 2:** The IOOS links to other environmental observing systems into the broader Earth Observing System (EOS), the Global Ocean Observing System (GOOS), and the Global Earth Observation System of Systems (GEOSS).
- **Goal 3:** The U.S. has an IOOS that provides valuable data to improve predictive and decision-making capabilities for the seven societal benefits with an initial focus on coastal inundation, navigation, public health, and ecosystem assessment.
- **Goal 4:** IOOS provides a process for the development and delivery of applications and decision support tools for advancing critical national priority issues.
- **Goal 5:** The IOOS will develop continuously through research and the incorporation of advances in technology and understanding into an operational capability.
- **Goal 6:** The IOOS makes a significant contribution to meet the ocean science education objectives of informal, formal, and work force and postsecondary communities.
- **Goal 7:** The nation's IOOS community collaboratively advances IOOS and ensures coordinated national benefits of the investments made by all members of the public, private, and academic sectors.



NOAA's Regional IOOS Development Activities



- NOAA intends to competitively fund projects under the FY07 Regional Integrated Ocean Observing System Development solicitation
 - Projects will support:
 - RCOOS development;
 - IOOS applications development; and
 - Data Management and Communication (local data network nodes)
- NOAA's FY08 Budget Request includes \$11.5M for the Regional Component of IOOS